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ABSTRACT

The tests of General Education Development (GED) provide adults with opportunities to attend and graduate from postsecondary institutions. A study investigated the academic achievement of GED recipients compared to that of high school diploma (HSD) students graduating from the Community College of Allegheny County (Pennsylvania) between June 1985 and August 1986. The t-test for independent sample means was employed to test the hypothesis that GED students graduate with higher cumulative grade-point averages (GPAs) than do HSD students. A total of 112 student EPAs were measured: 56 GED and 56 HSD students. According to study results, no significant difference was found to exist between mean cumulative GPAs of GED and HSD graduates. The theoretical framework of credentialism underlies the study's significance. Both GED and HSD students perceived the importance of obtaining the degree as a passport to the world of employment and college; employers also perceive the high school diploma as the minimum credential necessary for employees. (Author/KC)

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Academic Achievement of GED Graduates of the Community College of Allegheny County

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Abstract

The tests of General Educational Development provide adults with opportunities to attend and graduate from postsecondary institutions. The problem under investigation is the academic achievement of GED recipients compared to that of high school diploma (HSD) students graduating from the Community College of Allegheny County between June 1985 and August 1986. The t-test for independent sample means was employed to test the hypothesis that GED students graduate with higher cumulative grade-point-averages than do high school diploma students. One-hundred-twelve (112) student GPAs were measured: 56 GED and 56 HSD students. According to study results, no significant difference was found to exist between mean cumulative GPAs of GED and HSD graduates. The theoretical framework of credentialism underlies the study's significance. It is investigated as it relates to the research findings.

Academic Achievement of GED Graduates
of Community College of Allegheny County

Statement of Intent

The intent of this study is to investigate whether adults who have earned General Educational Development (GED) credentials graduate from Community College of Allegheny County with higher cumulative grade-point-averages than adults graduating who have earned traditional high school diplomas. The variables studied are academic achievement, defined as cumulative grade-point-averages on a 0.00 through 4.00 scale as recorded on official campus graduation rosters, and status of high school completion, whether GED or high school diploma, as recorded on CCAC Admissions Applications.

Statement of the Problem

Do students who have earned General Educational Development credentials realize greater academic success than students who have earned traditional high school diplomas?

Specifically:

(1) What is the academic performance of GED students as compared to academic performance of traditional high school graduates?

(2) Do GED students out perform traditional high school graduates at the community college level of higher education?

The results expected from this study are that adults who have earned GED credentials achieve higher grade-point-averages than traditional high graduates. I expect these results because the diversity of today's job market require adults to qualify

through certification of learning in order to obtain employment and/or advancement. The high school dropout comes to realize the liabilities of no credentials in a society where credentials are prolific. Mastering the tests of General Educational Development and pursing higher education credentials may drive the returning adult student toward perfection in academic achievement.

Significance of the Study

This particular study was undertaken for the following reasons:

(1) The tests of General Educational Development continue to offer a substantial number of adults the opportunity to qualify for high school equivalency credentials. Over a 15 year period (1970-1985), the office on Educational Credit and Credentials of the American Council on Education has issued GED credentials to 5,820,694 adults in the U.S. and Canada (GEDTS, 1986, p. 14). "These credentials [GED] continue to be accepted by more than 90% of the colleges and universities and by most employers to satisfy requirements for a secondary level credential (p. 2). The Community College of Allegheny County (CCAC) accepts for admittance adults holding GED credentials.

(2) Review of the literature indicates that GED credentialed adults plan to continue their education or training beyond the high school level. "The community college movement seemingly fulfills the traditional American quest for equality of opportunity without sacrificing the principle of achievement (Karabel, 1972, p. 523). CCAC's open-door admissions policy, low tuition, and adult learning populations may be the GED student's first experience with higher education.

(3) The theoretical concept underlying the study's significance is that of credentialism. As more adult students, attempting to keep up with technologies required in the job market,

enroll in higher education institutions, credentials, attesting to knowledge and ability, become more important.

(4) GED studies vary and range from descriptive to analytic, including universities and community colleges. The interest directed toward this particular population tends to reveal much needed information about adult learners. This study is undertaken to enhance existing knowledge and generalizability of findings related to this unique population.

Review of Related Literature

The tests of General Educational Development (GED) were developed in 1942 by the U.S. Armed Forces Institute as a means for World War II Veterans to re-enter civilian life and to continue educational and vocational pursuits (Colert, 1984; Sharon, 1972). GED tests came under the policy auspices and supervision of the Commission on Accreditation of Service Experiences (CASE), currently known as the Commission on Education Credit and Credentials, of the American Council of Education, in 1946 (Sharon, p. 1). The original 1942 GED edition, administered from 1942 through 1978, "concentrated on the ability to generalized concepts and ideas, to comprehend exactly, and to evaluate critically; they [sought] to determine the extent to which informal education experiences [had] had a long term impact equivalent to that which might be the result of a good formal education" (p. 2). Five specific tests comprised the GED battery: (a) Correctness and Effectiveness of Expression, (b) Interpretation of Reading Materials in the Social Sciences, (c) Interpretation of Reading Materials in the

Natural Sciences, (d) Interpretation of Literary Materials, and (e) General Mathematical Ability (Colert, p. 17). Validity studies involving the normalization of standard scores at both the national and regional levels were conducted in 1943, 1955, 1967, 1977, and 1980 (Byrd, Hayes, Hendrix, et al., 1973; Colert, 1984).

In 1978, new GED tests were introduced, with the following contextual and theoretical changes:

(1) Cumbersome test titles were changed to Writing Skills, Social Studies, Science, Reading Skills, and Mathematics; French and Spanish versions of the standard English test were introduced; large print and tests on magnetic tapes for use by the visually-impaired were developed (Swarm, 1981, p. 4).

(2) The Educational Testing Service (ETS) conducted time studies in 1974 and 1980, resulting in test reduction time from 10 hours to 6 hours and increased time allowed for the Writing Skills and Mathematics tests, respectively (Colert, p. 17). The GED Testing Service pre-set time limits for each test are:

Writing Skills	-	75 minutes
Social Studies	-	90 minutes
Science	-	90 minutes
Reading Skills	-	60 minutes
Mathematics	-	90 minutes

(3) Two predictive indices were developed to help candidates determine the likelihood of passing the tests - the General Education Performance Index (GEPI) and the GED Practice Tests (PGED) (Colert, p. 18; Swarm, p. 19).

The next revisions to the GED tests will be implemented in 1988. The Commission on Educational Credit and Credentials, the independent policymaking body of the GED test program, has

authorized tests which emphasize higher level thinking and problem solving skills. Major changes occur in theoretical and practical application. The Writing Skills tests will include an essay section and consists of two parts: knowledge of conventional written English and the direct ability to write. "The writing sample is a dramatic revision to the current test content...The English specifications panel [of the GED Tests Specifications Committee] believes that no one should receive credit for high school equivalency without being asked to demonstrate writing ability directly as well as indirectly" (ACE, 1985, p. 8; "Credentials panel", 1985). The Writing Skills Tests will be expanded to two hours - a 75-minute multiple choice section and a 45-minute essay. According to the American Council on Education, "each essay will be scored 'holistically' on a six point scale by two different readers...[focusing on] elements of organization, support, clarity, and correctness of expression" (p. 15).

Social Studies tests will incorporate economics, political science, geography, and history, with emphasis on global issues and the interdependence of individuals, groups, and nations. The tests will require candidates to read, interpret, and synthesize data on a critical thinking level (p. 41).

The Reading Test has been retitled Interpreting Literature and the Arts Test. It emphasizes popular and classical literature, and requires commentary about different literatures and the arts. "The change in name was suggested for two reasons: (1) all GED tests require reading skills, not just one and (2) literature and the arts comprise a significant part of the high school curriculum" (p. 53).

Considerable debate about the use of calculators with the Mathematics tests concerned teachers' fears that by permitting the use of calculators, an incorrect message that computation is no longer important may be transmitted to students. The Commission on Educational Credit and Credentials voted not to allow calculator use, citing findings that "no more than half of GED candidates own or use calculators" ("Commission says no", 1986). The Mathematics Test will continue to test arithmetic, algebra, and geometry, with increased emphasis on measuring applications of mathematical theory and addressing more than one mathematics concept in some test items (ACE, p. 61).

The Science Test remains a measure of abstract reasoning and problem solving abilities in both the life and physical sciences disciplines. The test will measure the examinee's understanding of how science relates to one's personal life, the natural environment, and the relationships between science educational skills and work activities (p. 49).

Each of the tests have been revised toward different skills requirements. Test specification committees for each subject area studied revisions over a five year period in order to construct tests which meet these 5 major objectives:

(a) the tests require high level thinking and problem solving skills

(b) there is a clear emphasis on the relationships between test skills measured and workplace tasks

(c) examinees must have knowledge of computer technology's impact on daily life, rather than knowledge of computer operations

(d) consumer skills will be addressed; the application of educational skills and knowledge will be required to solve consumer problems

(e) stimulus materials and settings which adults should recognize will be incorporated in test materials (p. 5-7).

Not only are substantive, contextual changes occuring in GED tests, but cosmetic changes are slated for the Office on Educational Credit and Credentials. The office will be known as the Center for Adult Learning and Educational Credentials. The Center's function will remain that of operating programs which evaluate learning that takes place outside of higher education institutions. The change reflects "the changing nature of the college student population" ("American Council renames", 1987).

Profiles of GED Adults

Employment opportunities, postsecondary education, and personal growth are shown to be primary motivators of adults earning GED credentials. Several studies (Ayers, 1980; McLawhorn, 1981; Swarm, 1981) indicated that candidates perceived the GED certificate as a means toward new employment and promotions. Karabel (1972) acknowledges that Americans believe in upward mobility through education...[and] the lack of proper degrees may well be fatal to

the realization of aspirations (p. 523).

Ayers (1980) reports in his educational and employment growth study of 50 GED graduates of Surry Community College, Dobson, NC, that the college's GED program was valued because the resulting credential could help students gain employment, job promotions, and salary increases. Of the 64% employed, 35% reported GED helped gain employment; 15%, that GED helped get a promotion; 19%, that GED helped gain an increase in pay (p. 70).

Between 1978 and 1980, Southeastern Community College, Whiteville, North Carolina, operated two high school completion programs - the Adult High School Diploma (AHS) and GED High School Equivalency Tests - which required study programs and no study preparation, respectively. McLawhorn (1981) reports that 23% of those surveyed chose the high school completion programs because they had chances for job promotions or college admittance (p. 8). Forty-four percent (44%) of the graduates of the combined programs subsequently enrolled at S.C.C. to obtain further training. Career programs (e.g., terminal, nontranfer degree) were the most popular choices of these students (p. 10, 12).

The intent of three studies conducted by Swarm (1981) during 1971-72, 1977-78, and 1980-81 were to examine the academic achievement of GED students in postsecondary education. The 1980-81 study focused on 549 GED two and four year college students in Indiana, Illinois, Flordia, California, and Pennsylvania. Over one-half of the students (52%) expressed employment reasons for taking the GED tests and enrolling in college. Job promotion and employment prerequisites were top-ranked reasons (p. 18). Swarm

concludes that GED college students possess "a strong desire to succeed in college due to deficiency in traditional high school educations, and to increase earning and economic potential" (p.21).

The Maryland State Department of Education wanted to know how well high school equivalency programs contributed to increased employment and tax revenues. GED recipients were surveyed statewide to determine their employment and education statuses. Survey results indicated that "the unemployment rate among those surveyed dropped from 23% to 18% after [candidates] took the test...[and] that the state gets back $10 in taxes for each dollar it spends on GED programs, because of higher salaries earned by GED recipients" ("Higher School Equivalency", p. 382). Employment and postsecondary opportunities were the expectations. Fifty-five percent (55%) thought the credential would help them get jobs; 23% expected promotions; 72% expected to on to post-secondary schools, with 51% actually do so (p. 382).

Academic Achievement

Success in college, as measured by grade-point-averages, and validity of GED scores as predictors of that success, are based on descriptive and analytic studies involving comparisons between GED recipients and high school diploma (HSD) graduates attending 2-and 4-year postsecondary institutions. The use of grade-point-averages, weighted averages of grade quality points and credit hours earned in previous courses, as indicators of academic achievement is widespread. Sharon (1972) states:

> There are several reasons for the frequent past use of the GPA as a

> criterion of academic achievement. College administrators view the GPA as a relevant index of success...[it is] used to determine whether a student should remain in college, take advanced courses, or receive special honors. Secondly, the GPA is readily available in the files of many colleges... Finally, no other single index of college success which is clearly more relevant or acceptable than the GPA has yet been developed (p. 38).

The shortcomings of the GPA as a success indicator are pointed out by Davis (cited in Sharon, 1972). These shortcomings include the variability of the index which changes by semester; the GPA measures academic success without consideration of other student characteristics such as self-concept, race, age, and motivations; grades may lack variability in issuance and may not be true indicators of student talent (p. 38).

Sharon (1972) studied the relationship of GED scores to grades in college of 1208 students, at 40 different 2-and 4-year postsecondary institutions. Validity coefficients indicated that GED scores could be used as indicators of college academic success, especially for junior colleges (p. 43). Patterns of validities differed between junior and senior institutions. He found that "the Social Studies Test is the best predictor in the two-year colleges; whereas literature [Reading Skills] is the most

predictive of success in the four-year colleges...type of institution can be considered a moderator of the relationship between GED and GPA" (p. 43). An extention of the study included comparison of each GED student's grade-point-average against the mean grade-point-average at the college attended. GED students (55%) had lower GPA's than that of all students at their college, while other GED students (45%) had grades equal to or higher than those of the high school diploma graduates. He concurs with Tyler's 1954 study results by which it was concluded that "the academic achievement of GED students is only slightly but insignificantly lower than that of regular high school graduates (p. 39).

Three groups of first-year students at South Plains College, Levelland, Texas, were studied to determine the predictive value of GED tests for two year college academic success. Wolfe (1983) compared the first term GPA of 100 GED students, 100 high school graduates, and 100 high school non-graduates who had not earned GED credentials. He concludes that "a significant relationship was found to exist between the standard score of GED subtest and first-semester GPA of both transfer and terminal degree GED students" (p. 8). Further, no significant differences in first-semester mean GPA between the three groups existed (p. 10). However, the Reading Test differences between GED students pursuing transfer programs and those pursuing career (terminal degree) were highlighted. Transfer students performed better on the GED test than career students, standard score 54 and 50, respectively. "Verbal skills seem to be quite important to success of GED students in transfer degree programs and to a lesser degree in terminal degree programs" (p. 11).

Wolfe supports the hypothesis that GED tests are valid indicators of first-semester GPA at two-year institutions.

College freshmen basic skills in English Composition, reading, and mathematics usually are tested prior to course selection so that academic advisement is proper. Community Colleges' adult student populations vary, therefore, basic skills tests provide some indication of student academic strengths and weaknesses in order to avoid academic difficulties as students progress in their studies. Byrd, et al. (1973) studied and compared performance levels in freshman English, mathematics, and reading comprehension of GED and HSD freshmen at Wilkes Community College, Wilkesboro, N.C. No significant differences were found to exist between the three groups in terms of the areas compared. He concludes that "the traditional high school graduates need reinforcement skills at the same level as GED recipients" (p. 42).

Several studies (Cervero, 1983; Colert, 1984; Rogers, 1977; Swarm, 1981) revealed some of the problems faced by GED adults in postsecondary education, and population characteristics. Cervero and Cunningham (cited in Cervero, 1983) report that race has a fairly substantial relationship to GED test performance (p. 14). Reading ability has been shown to differ between white and black population subgroups and is reflected in GED test performance in reading and mathematics. "Except for race, candidates' personal characteristics are not strong predicators of test performance" (p. 13). As a result of this differentiation, it may be hypothesized that blacks who earn GED credentials and enroll in postsecondary education may face increased academic difficulties due to deficiencies in reading ability.

Academic success and failure of GED college students may be influenced by lack of knowledge about college educational resources. According to the American Council on Education's national survey of college admissions and credit-granting policies for adult learners, nearly 1 in 20 freshmen [120,000 in Fall 1984] were GED graduates, with full time enrollment accounting for more than one-half of the enrollments, proportionately more frequent at public and 2-year colleges ("One in twenty", p. 4). The age range of GED freshmen has been reported as 26 through 33 years (Ayers, 1980; Colert, 1984; Rogers, 1977; Sharon, 1972; Swarm, 1981). Colert (1984) and McLawhorn (1981) report that many of these adults do not seek learning skills help (p. 91; p. 15). Swarm (1981) interviewed 109 sophomore GED recipients at Northeastern Illinois University and Chicago State University. These students continued to mention the need for special help in communication and writing skills, vocabulary development, reading improvement, and library research skills. They "did not feel as well prepared for college as their high school diploma counterparts...due to lack of traditional high school education and their loner status, due to age" (p. 17). The use of learning resource centers as an educational aid is confirmed by McLawhorn's (1981) findings that performance of GED graduates who had utilized study centers achieved higher GED scores and grade-point-averages than non-study groups (p. 14, 15).

The preceeding literature review is intended to establish GED tests as viable means towards credentials that adults seek for labor market and postsecondary reasons. Over a 45-year period, the tests have been refined so that they are valid and reliable.

The GEDTS continues to update them in challenge of adult knowledge acquired as a result of life experiences, work tasks, and technological advances.

It has been shown that GED recipients seek the credential for employment and educational purposes. Although several researchers commented about academic difficulties experienced by GED students, the tests have been shown to be valid predictors of freshmen grade-point-averages. Community and junior colleges seem to be the higher education choice of those GED students studied.

In the following sections, I investigate whether adults who have earned GED credentials graduate from Community College of Allegheny County with higher cumulative GPA's than adults graduating who have earned traditional high school diplomas. This study differs from those cited in that it is intended to measure postsecondary outcomes at graduation, rather than postsecondary outcomes of freshmen level study.

Definitions, Delimitations, and Limitations

The Community College of Allegheny County, Boyce Campus is located in Monroeville, PA and is 1 of 4 campuses of the system. Associate of Arts (A.A.), Associate of Science (A.S.) degrees, and Certificates are awarded in over 100 career (terminal degree) and transfer programs. Academic achievement is measured in terms of a student's grade-point-average, with a minimum cumulative GPA of 2.00 required for graduation. The final, cumulative GPA's of 56 GED and 56 HSD students graduating between June 1985 and August 1986 are the sampling units measured to indicate academic achievement.

This study is concerned with graduates of Boyce Campus, rather than system-wide graduates. The campus admits high school graduates and GED certificated adults to full-time study. Students are required to have 1 of the 2 documents in order to be admitted. Although programs of study are compartmentalized toward completion in 4 to 5 semesters, adult students may require more time, due to part-time study. This project does not take into consideration how long the student was enrolled, only the outcome of study at graduation. Type of program, (e.g., career or transfer) is not considered. Associate of Arts and Associate of Science degrees carried the same weight for study purposes. Courses completed through Community College of Allegheny County only are calculated as cumulative quality-point-averages. Effects of sex, race, age, and previous college experience are not measured.

Constraints on the applicability of this study's findings are limited, due to the nature of the sample and exclusion of personal characteristics. Only verifiable GED-and HSD-statuses were sampled. New students are requested to indicate on the CCAC Admissions Application the status of high school completion (e.g., GED or High School Diploma). Not all students complied. Those for whom statuses could be determined through the College's student database were included in the population of 1018 graduates. Certificate, short-term non-degree, graduates and those students without GED or HSD Codes were eliminated from the study.

Methodology

Official Graduation Lists, certified by the campus Dean of Students, were used to access the "Admissions/Entry" database of each of the 1270 graduates between January 1985 and August 1986. Each graduate's social security number was verified, cumulative, final GPA, and high school code designation were recorded. Student files not containing high school codes, and students graduating with Certificates were eliminated from the population. These categories were eliminated because HDS or GED could not be verified. Certificate programs do not require the same criteria as degree programs.

I identified 56 students who had been coded as GED recipients according to their initial Admissions Application. I drew a random sample of 56 high school diploma graduates.

The t-test for independent sample means was employed to test the hypothesis that adults who have earned GED credentials graduate with higher GPAs than adults graduating who have earned traditional high school diplomas. Three conditions underlie the use of the statistical test employed: (a) score independence, (b) normality of population distributions, and (c) homogeneity of population variances (Galsnapp and Poggio, 1985, p. 367-368). These conditions are met based on the nature of the sampling plan.

Students

The 112 graduates selected in the study earned either an Associate of Science or Associate of Arts degree. Both degrees require a minimum 2.00 GPA and minimum 60 credit hours. Credit

hours transferred from other postsecondary institutions do not carry quality points and are not calculated as part of the GPA. The A.S. degree is intended for students who study career skills needed for employment. The A.A. degree is intended for those who study liberal arts for transfer to other postsecondary institutions. The graduates showed preference for A.S. degrees: 89% of the 112 earned the Associate of Science degree. Ninety percent (90%) of HSD and 86% of GED graduates earned the credential.

Age ranges for HSD and GED were 20 through 52, and 24 through 55 years, respectively. The mean age of HSD graduates was 31.5 years; the GED, 34.5 years.

Procedure

The following statistics were calculated for each sample:

(a) GED (n = 56)

the mean GPA = 3.21 ; $\bar{X}$ = 3.21

the standard deviation - 0.5004 ; s_x = 0.5004

the variance = 0.7074 ; s_x^2 = 0.7074

(b) HSD (n = 56)

the mean GPA = 3.03 ; $\bar{y}$ = 3.03

the standard deviation = 0.5026 ; s_y = 3.5026

the variance = 0.7089 ; s_y^2 = 0.7089

The t-test for independent sample means formula is:

$$t_{obs} = \frac{\bar{X} - \bar{Y}}{s_{\bar{x}-\bar{y}}} \qquad (1)$$

where

$$s_{\bar{x}-\bar{y}} = \sqrt{s_p^2 \left(\frac{1}{n_x} + \frac{1}{n_y}\right)} \qquad (2)$$

where $$s_p^2 = \frac{(n_x-1)s_x^2 + (n_y-1)s_y^2}{n_x + n_y - 2} \quad (3)$$

The null hypothesis: there is no difference between mean cumulative GPA of GED and HSD graduates.

$$H_o : \mu_x - \mu_y = 0$$

The research hypothesis: GED graduates earn higher mean cumulative GPAs than HSD graduates.

$$H_A : \mu_x - \mu_y > 0$$

Level of significance is .05

$$\underline{p} = .05$$

where $$CR: \underline{t} \geq + 1.658 , \quad \underline{df} = 110$$

Computation of t-statistic

$$\underline{t}_{obs} = \frac{\bar{x} - \bar{y}}{s_{\bar{x}-\bar{y}}} = \frac{3.21 - 3.03}{0.1590} = \frac{0.18}{0.1590} = 1.132$$

$$\underline{t}_{obs} = 1.132$$

where: $$s_{\bar{x}-\bar{y}} = \sqrt{s_p^2 (\frac{1}{n_x} + \frac{1}{n_y})} = \sqrt{.02529} = 0.1590$$

where: $$s_p^2 = \frac{(n_x-1)s_x^2 + (n_y-1)s_y^2}{n_x + n_y - 2} = \frac{(55)(.7074) + (55)(.7089)}{110} = 0.708$$

Decisions: Retain the scientific hypothesis

Reject the research hypothesis

Results

The main result is that no significant difference in academic achievement was found to exist between GED and HSD graduates of CCAC, Boyce Campus. Based on this study, academic achievement was not affected by status of high school completion. I conclude that GED adults works academically as hard as HSD adults in pursuit of Associate degree credentials. It is noted that both samples included "Honor" and "High Honor" student such that 52% of GED and 41% of HSD graduates earned the designations. "Students whose academic achievement has earned them a cumulative Q.P.A. of 3.20 to 3.49 are graduated with 'Honor'...3.50 to 4.00 are graduated with 'High Honors'" (CCAC, p. 35). Although 16 of the GED students (29% of the sample) graduated High Honors compared to 10 HSD students (18% of the sample), the research hypothesis formulated on the belief that GED students, recognizing the liability of no credentials in a credentialed society, academically out-perform HSD students must be dismissed.

Conclusions

The theoretical framework of credentialism underlies this study. Gordon (1974) defines credentialism as "the imposition by employers of educational requirements that are not clearly indicated by the requirements of particular jobs" (p. 9). These educational requirements help employers make decisions about allocation of jobs and, as a result, credentials are signals used "to predict the trainability and productivity of potential employees" (Craig, 1981; p. 153)

Several theorists (Arrow, 1973; Collins, 1979; Dore, 1976; Spense, 1974; Thurow, 1974) have acknowledged the roles which

schooling and job competition play in the credential market. Dore (1976) examines various international economic development approaches which capitalized on people's desires to leave rural traditionalism for modernity of economic development. The visa into the "bridge-head zone" was schooling (p. 3). Because jobs were allocated on the basis of qualifications, certified by credentials,"the only way to make the transition was by the cable cars of the educational system" (p. 75). Employers are portrayed as perpetuators of qualification escalation. Dore states:

> The chief reason seems to be that they [employers] are simply unquestioning victims of the widespread myth that education 'improves' people, and that they are therefore getting more for their money if they get a senior certificate for 5 pounds a week rather than a junior certificate (p. 5).

Collins (1979) theorizes that people compete for credentials because they believe that education is key to one's social mobility (p. 183). Although his study rebukes such beliefs by illustrating that social mobility is consistent across social strata, regardless of credentials, he makes known that "educational credentials have become the currency for employment, so that a greater abundance of even this artificial good might be expected to make a difference" (p. 183). Students who have earned GED credentials and subsequently enroll in higher education institutions have been shown to express

the same belief in education as a mean towards gainful employment and promotions. Why? One answer is possibly the belief that education promotes upward social mobility. Earned credentials are external signs that one has achieved, or is attempting to achieve, that boost up the social ladder.

Economic theorists Arrow (1973) and Spense (1974) discuss credentialism as it serves to fulfill the filtering function of higher education, and to convey information about individuals in job markets. "Higher education serves as a screening device, in that it sorts out individuals of differing abilities, thereby conveying information to the purchasers of labor" (Arrow, p. 194). The completion of a postsecondary degree programs begins the process of using the credential as a market signal to attract employer attentions which many hope will lead to coveted positions in the labor market. Although the employer does not know prior to hire how productive an employee will be, the employer still looks for some distinguishing signal which can possibly help sort the potential employees (p. 194). Spense (1974) acknowledges that

> "potentially relevant characterists such as education are partially or completely controllable by the individual [who] will make those adjustments which make him or her appear in a favorable light in the eyes of potential employers" (p. 10).

Lack of a high school diploma or GED is as much a market signal as possession of them. Credentials are alterable personal

characteristics which job seekers know will attract employer attention. GED, HSD, Associate degrees are the minimum credentials which meet employment requirements of today's workplaces.

Thurow's (1974) job competition model was a prediction that educational credentials would become more valuable as the supply of educated labor increased. As more people were hired based on background, education would be used defensively to protect one's market share (p. 416). These study results help fulfill his prediction. GED students academically competed for credentialed education as aggressively as HSD students. The cycle of credentialism requires employers, job-seekers, and higher education cooperation. Each has some inherent interest in the outcomes of the educational process.

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